

Title (en)
MULTIPLEXED PROFILING OF RNA AND DNA MODIFICATIONS

Title (de)
MULTIPLEX-PROFILIERUNG VON RNA- UND DNA-MODIFIKATIONEN

Title (fr)
PROFILAGE MULTIPLEXÉ DE MODIFICATIONS D'ARN ET D'ADN

Publication
EP 4251760 A1 20231004 (EN)

Application
EP 21830371 A 20211124

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Abstract (en)
[origin: WO2022115608A1] Provided herein are compositions and methods for the multiplexed profiling of RNA and DNA modifications across transcriptomes and genomes, respectively. The methods combine molecular recognition of non-canonical features (e.g., base modifications, backbone modifications, lesions, and/or structural elements) of a target nucleic acid with a step of writing the information from this recognition event into the neighboring genetic sequence of the target nucleic acid using a barcode. The resultant barcoded nucleic acids are then converted into sequencing libraries and read by DNA/RNA sequencing methods. This step reveals the sequence of the barcode, which is correlated with the non-canonical feature in the target nucleic acid(s). The high throughput profiling methods described herein allow for localization of one or more modifications in a target nucleic acid. The methods also allow for identification of the nature and location of several or all DNA/RNA modifications in parallel.

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